

## Statewide Collision Categories

Table 1 compares major collision categories and measures of exposure for 1996 through 1999. The total number of traffic collisions in 1999 increased by 4.3% from 1998, while fatal collisions increased 9.4%. Total fatalities increased 4.9% from the previous year. The percentage of injury collisions rose by 1.7% and the number of property damage collisions increased by 5.8%.

<b>Table 1</b> <b>Idaho Traffic Collision Data and Measures of Exposure: 1996-1999</b>						
	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>Change 1998-99</b>	<b>Avg. Yearly Change 1996-98</b>
Total Collisions	23,529	23,839	24,041	25,076	4.3%	1.1%
Fatal Collisions	228	220	224	245	9.4%	-0.8%
Total Deaths	258	259	265	278	4.9%	1.4%
Injury Collisions	8,880	9,111	9,098	9,256	1.7%	1.2%
Total Injured	14,275	14,133	13,920	14,069	1.1%	-1.3%
Property-Damage-Only Collisions (Severity >\$750)	14,421	14,508	14,719	15,575	5.8%	1.0%
Idaho Population (thousands)	1,189	1,210	1,229	1,252	1.8%	1.7%
Licensed Drivers (thousands)	828	852	871	881	1.2%	2.6%
Vehicle Miles of Travel (millions)	12,924	13,112	13,644	14,328	5.0%	2.8%
Registered Vehicles (thousands)	1,234	1,260	1,330	1,316	-1.0%	3.8%

Changes in the number of collisions can often be correlated with changes in state population, the number of drivers, number of registered vehicles, and the statewide Annual Vehicle Miles of Travel (AVMT). In 1999, the number of licensed drivers increased by 1% while the population grew by an estimated 2%. The number of registered motor vehicles decreased by 1% in 1999.

The statewide AVMT increased by 5% in 1999 compared to an average increase of 3% from 1996 to 1998. Commercial vehicles accounted for 17% of the statewide AVMT in 1999.

## Fatality and Injury Rates

Table 2 shows the fatality and injury rates for 1996-1999. Both the fatality and injury rates per 100 million AVMT have been dropping since 1994. While the fatality rate decreased between 1998 and 1999, the change was negligible.

<b>Table 2</b> <b>Fatality and Injury Rates per 100 Million AVMT 1996-1999</b>						
	1996	1997	1998	1999	Change 1998-99	Avg. Yearly Change 1996-98
Fatality Rate	2.00	1.98	1.94	1.94	-0.1%	-1.4%
Injury Rate	110.45	107.79	102.02	98.19	-3.8%	-3.9%

Figures 1 and 2 illustrate fatality and injury rates per 100 million AVMT for the U.S. and Idaho. At press time, the 1999 U.S. fatality rate estimate was not available.

Figure 1  
**Traffic Fatality Rates per 100 Million Annual Vehicle Miles of Travel  
 For Idaho and The U.S.: 1989-1999**

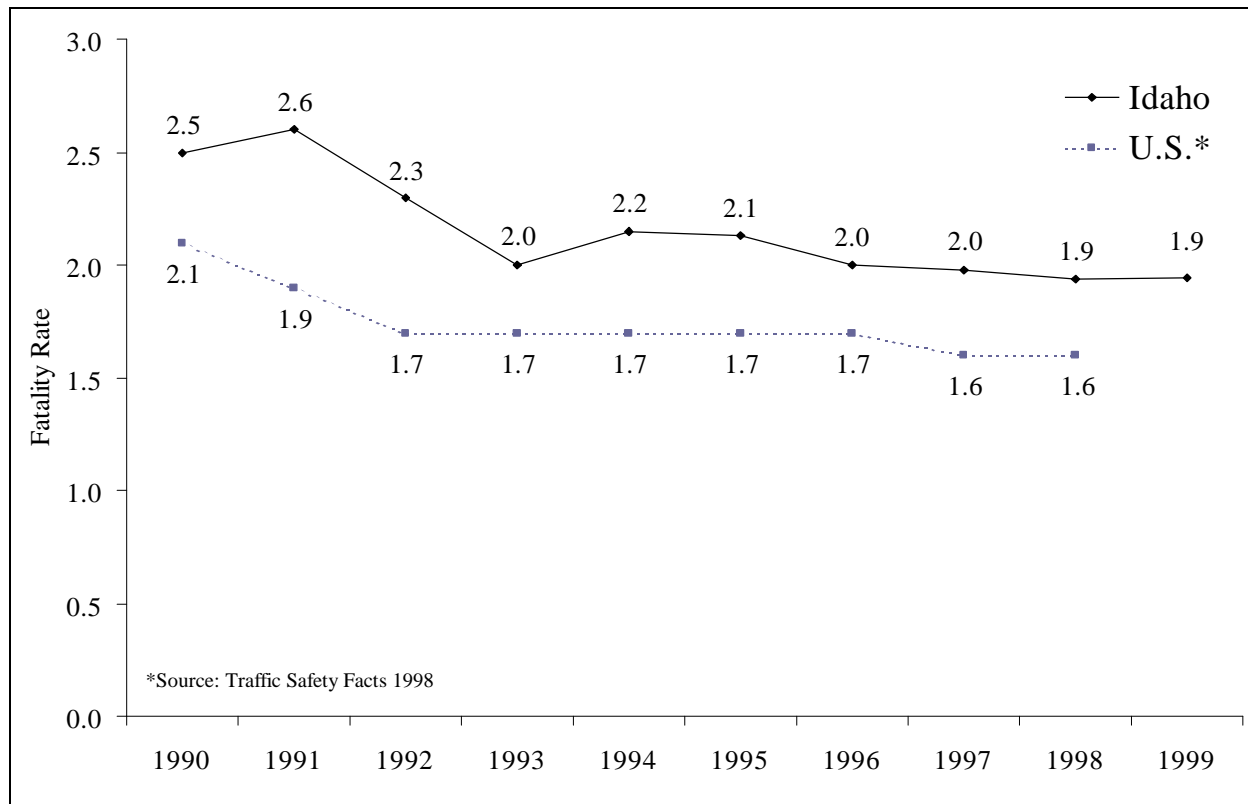
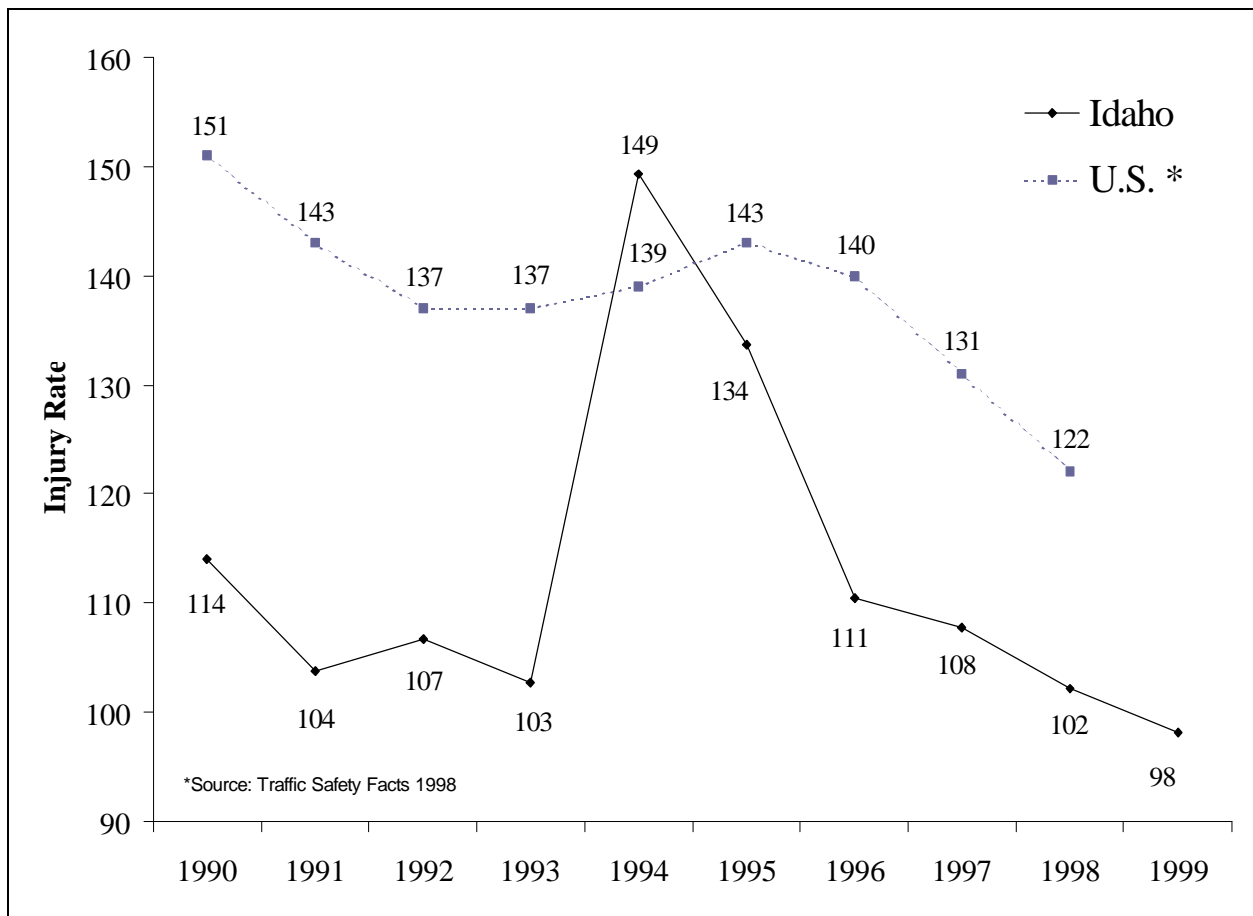


Figure 2  
**Traffic Injury Rates per 100 Million Annual Vehicle Miles of Travel: 1989-1999**



Fatality and injury rates have varied over the past decade. Factors such as vehicle safety features, limited access highways, engineering improvements, occupant restraint usage, demographic changes and reduction in driving under the influence tend to reduce fatalities and injuries. Increases in VMT, licensed drivers, registered vehicles, changes in reporting, and higher average speeds tend to increase the number of fatalities and injuries. The jump in the injury rate in 1994 corresponds with better identification of injuries after statewide training for law enforcement officers with the introduction of a new collision report form in 1994.

## Injury Severity

Table 3 presents the injury severity distribution among persons involved in collisions from 1996 through 1999. The number of fatalities rose in 1999 to 278. An increase in the total number of persons involved in collisions is a reflection of the increase in the number of collisions in 1999.

<b>Table 3</b> <b>Injury Severity of Persons Involved in Collisions: 1996-1999</b>						
	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>Change 1998-99</b>	<b>Avg. Yearly Change 1996-98</b>
Fatal	258	259	265	278	4.9%	1.4%
Serious Injuries	1,842	1,894	1,825	1,824	-0.1%	-0.4%
Visible Injuries	5,013	5,245	5,157	5,285	2.5%	1.5%
Possible Injuries	7,420	6,994	6,938	6,960	0.3%	-3.3%
No Injuries	48,163	48,404	49,896	51,316	2.8%	1.8%
Unknown / Missing	275	537	497	426	-14.3%	43.9%
Total Persons in Collisions	62,971	63,333	64,578	66,089	2.3%	1.3%

## Collision and Injury Costs

Table 4 gives estimated economic costs for Idaho motor vehicle collisions in 1999. Estimates in this table are based on 1994 Federal Highway Administration (FHWA) cost estimates for collisions.<sup>1</sup> The cost estimates are updated to 1999 dollars using the Gross Domestic Product Implicit Price Deflator Ratio. The components of the cost estimates include productivity losses, property damage, medical costs, rehabilitation costs, travel delay, legal and court costs, emergency service costs, insurance administration costs, premature funeral costs and costs to employers. The estimated cost of Idaho collisions in 1999 was \$1.6 billion. The total cost increased by \$66.8 million dollars from last year's estimated cost.

<b>Table 4</b> <b>Economic Cost of Idaho Collisions: 1999 Estimates</b>			
<b>Incident Description</b>	<b>Total Occurrences</b>	<b>Cost Per Occurrence</b>	<b>Cost Per Category</b>
Fatalities	278	\$2,897,492	\$805,502,911
Serious Injuries	1,824	\$200,596	\$365,886,436
Visible Injuries	5,285	\$40,119	\$212,029,585
Possible Injuries	6,960	\$21,174	\$147,370,926
Property Damage Only	15,575	\$2,229	\$34,714,189
<b>Total Estimate of Economic Cost</b>			<b>\$1,565,504,046</b>

In addition to the FHWA's study, the National Highway Traffic Safety Administration (NHTSA) also did a study on the costs of collisions. The NHTSA study not only concentrated on the costs of collisions, but also who pays the costs. Table 5 is a combination of two tables from the NHTSA study and shows the source of payment distribution of collision costs for each component of the costs. The total percentage for each source of payment is also included at the bottom.

<b>Table 5</b> <b>Estimated Source of Payment for Each Motor Vehicle Crash Cost Component</b>							
	<b>Federal</b>	<b>State</b>	<b>Total Government</b>	<b>Insurer</b>	<b>Other</b>	<b>Self</b>	<b>Total</b>
Medical	14.40%	9.76%	24.16%	54.85%	6.36%	14.62%	100.00%
Pre-Funeral	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
Emergency Service	3.87%	75.75%	79.62%	14.74%	1.71%	3.93%	100.00%
Vocational Rehabilitation	14.40%	9.76%	24.16%	54.85%	6.36%	14.62%	100.00%
Market Production	16.20%	3.06%	19.26%	41.09%	1.55%	38.10%	100.00%
Household Production	0	0	0.00%	41.09%	1.55%	57.36%	100.00%
Insurance Administration	0.89%	0.51%	1.40%	98.60%	0.00%	0.00%	100.00%
Workplace Costs	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%
Legal / Court	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
Travel Delay	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%
Property Damage	0.00%	0.00%	0.00%	65.00%	0.00%	35.00%	100.00%
<b>Percentage of Total Costs</b>	<b>6.32%</b>	<b>2.88%</b>	<b>9.20%</b>	<b>54.64%</b>	<b>6.79%</b>	<b>29.37%</b>	<b>100.00%</b>

The most significant point from the above table is that society at large picks up just over 70% of all crash costs incurred by individual motor vehicle crash victims. These costs are passed on to the general public through insurance premiums, taxes, direct out-of-pocket payments for goods and services and increased charges for medical care.<sup>2</sup>

## Collisions by Roadway Classifications

Table 9 compares the number of total, fatal and injury collisions by urban and rural classification. Urban roadways are defined as those within the city limits of cities with 5,000 people or more. Urban roadways tend to carry higher volumes of traffic at lower speeds while rural roads carry lower traffic volumes at higher speeds.

<b>Table 9</b> <b>Comparison of Collisions by Roadway Classification: 1996-1999</b>						
	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>Change 1998-99</b>	<b>Avg. Yearly Change 1996-98</b>
Total Collisions:	23,529	23,839	24,041	25,076	4.3%	1.1%
Urban	12,879	13,154	13,953	14,503	3.9%	4.1%
Rural	10,650	10,685	10,088	10,573	4.8%	-2.6%
Fatal Collisions	228	220	224	245	9.4%	-0.8%
Urban	39	28	28	36	28.6%	-14.1%
Rural	189	192	196	209	6.6%	1.8%
Injury Collisions:	8,880	9,111	9,098	9,256	1.7%	1.2%
Urban	4,626	4,801	5,079	5,129	1.0%	4.8%
Rural	4,254	4,310	4,019	4,127	2.7%	-2.7%

In 1999, 85% of fatal collisions occurred on rural roads, whereas 42% of all collisions occurred on rural roads. In Idaho, 94% of the total road mileage is classified as rural roadway. Of the roads designated for speeds of 55 mph or greater, 99.5% are classified rural. Crashes at higher impact speeds have a greater probability of resulting in a fatality.<sup>3</sup>

The high percentage of rural roadways in Idaho may account for the fact that Idaho's fatality rate is consistently higher than the U.S. fatality rate.

Table 10 shows the number of collisions and collision rates on local and state system roadways (both interstate and non-interstate) for 1996-1999, and the number of collisions statewide. Collision rates are lower than the statewide fatality and injury rates shown in Table 2 because multiple fatalities or injuries may occur in a single collision.

<b>Table 10</b> <b>Collision Rates for Local and State System Roadways: 1996-1999</b>						
<b>Roadway Information</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>Change 1998-99</b>	<b>Avg. Yearly Change 1996-98</b>
<b>Local:</b>						
VMT (100 millions)	60.7	59.6	63.3	68.2	7.8%	2.2%
Fatal Collisions	76	88	78	87	11.5%	2.2%
Injury Collisions	4,934	5,237	5,210	5,211	0.0%	2.8%
Total Collisions	13,655	14,290	14,275	14,714	3.1%	2.3%
Fatal Collision Rate	1.3	1.5	1.2	1.3	3.5%	0.7%
Injury Collision Rate	81.3	87.9	82.3	76.4	-7.2%	0.9%
Total Collision Rate	225.0	239.8	225.5	215.7	-4.4%	0.3%
<b>State System (Non-Interstate):</b>						
VMT (100 millions)	38.5	42.7	42.9	41.0	-4.5%	5.7%
Fatal Collisions	114	87	97	114	17.5%	-6.1%
Injury Collisions	2,558	2,557	2,592	2,639	1.8%	0.7%
Total Collisions	6,333	6,381	6,532	6,897	5.6%	1.6%
Fatal Collision Rate	3.0	2.0	2.3	2.8	23.0%	-10.1%
Injury Collision Rate	66.4	59.9	60.4	64.4	6.6%	-4.5%
Total Collision Rate	164.5	149.4	152.3	168.3	10.5%	-3.6%
<b>Interstate:</b>						
VMT (100 millions)	30	28.8	30.2	34.1	12.8%	0.4%
Fatal Collisions	38	45	49	44	-10.2%	13.7%
Injury Collisions	1,388	1,317	1,296	1,406	8.5%	-3.4%
Total Collisions	3,541	3,168	3,234	3,465	7.1%	-4.2%
Fatal Collision Rate	1.3	1.6	1.6	1.3	-20.4%	13.6%
Injury Collision Rate	46.3	45.7	42.9	41.3	-3.9%	-3.7%
Total Collision Rate	118.0	110.0	107.1	101.7	-5.1%	-4.7%
<b>Statewide Totals:</b>						
VMT (100 millions)	129.2	131.1	136.4	143.3	5.0%	2.8%
Fatal Collisions	228	220	224	245	9.4%	-0.8%
Injury Collisions	8,880	9,111	9,098	9,256	1.7%	1.2%
Total Collisions	23,529	23,839	24,041	25,076	4.3%	1.1%
Fatal Collision Rate	1.8	1.7	1.6	1.7	4.1%	-3.5%
Injury Collision Rate	68.7	69.5	66.7	64.6	-3.1%	-1.5%
Total Collision Rate	182.1	181.8	176.3	175.0	-0.7%	-1.6%

## Contributing Circumstances in Collisions

Figure 8 portrays the top seven most prevalent contributing circumstances recorded for fatal collisions, injury collisions, and all collisions. For every vehicle involved in a collision, the investigating officer may indicate on the collision report up to three circumstances contributing to the cause of the collision.

Figure 10  
Top Seven Primary Contributing Circumstances Cited for Traffic Collisions in 1999

